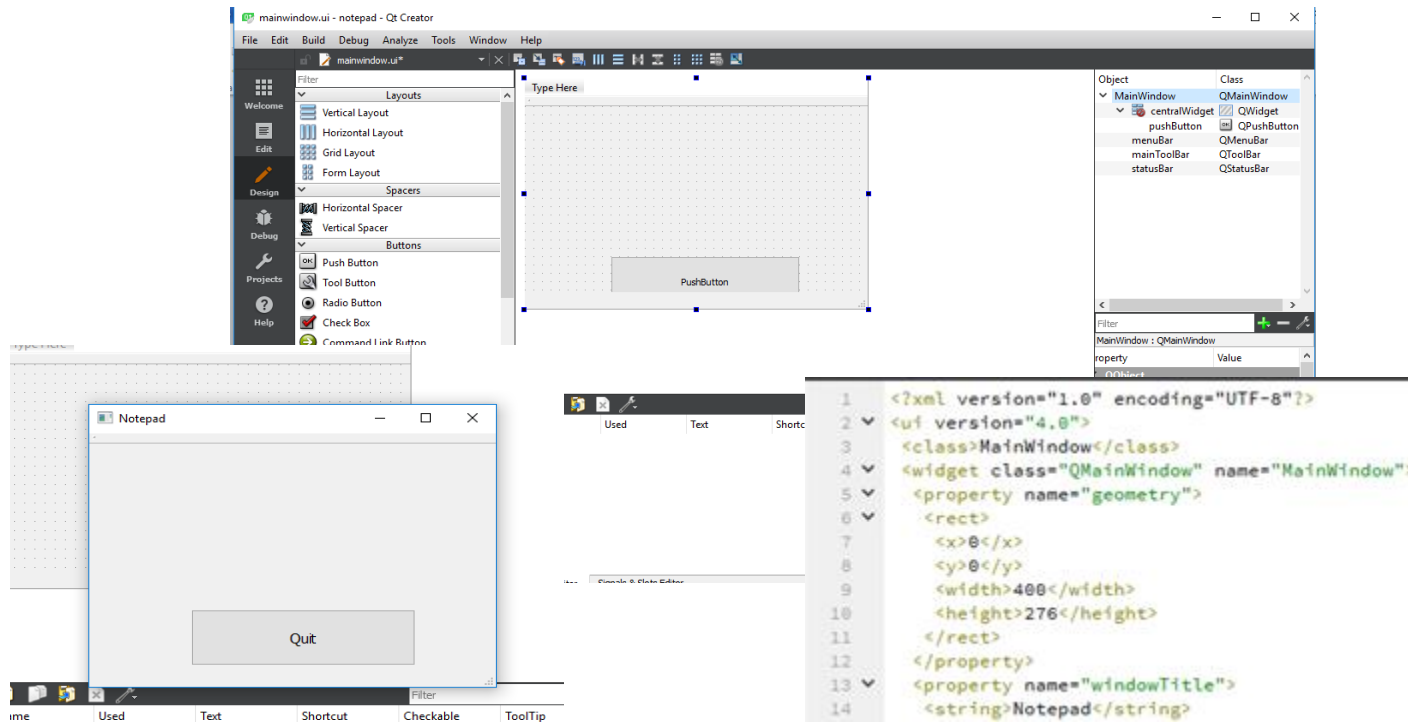


An Introduction to Qt



Qt - Cross-platform application development framework for desktop, embedded and mobile

- First developed in 1995 by two Norwegian students
- Acquired by Nokia in 2008
- Acquired by Digia in 2012
- Open source framework but there are commercial licenses available
- Traditionally written in C++: less learning effort if you know C++
- Rich set of Widgets (1000+) and Qwt Classes (125+)
- Good documentation and examples at the IDE or at:
<http://doc.qt.io/>

- Used world wide by many companies

European Space Agency

Google Earth

Skype

KDE (Operating System Dist. on Linux)

Adobe Photoshop Album (graphics)

Autodesk Maya (Animation)

VLC (Video)

Panasonic and Thales IFE (Airline)

Navico (Navigation)

Eykona (healing process monitor)

Barco (Medical Imaging)

Michelin, Intel, HP, Samsung, Blackberry, ABB, AMD, Epson, HONDA, Cannon, ...

When Qt is installed the following tools are available

- Qt Creator: Cross platform IDE
- Qt Designer: GUI layout and forms builder
- Qt Linguist: Internationalization toolset
- Qt Assist: Customizable documentation reader
- Qt Qmake: Cross platform build tool
- Plugin for other IDE: Integration with Visual Studio and Eclipse
- Configure: Tool to configure Qt on any specific platform
- Qt SDK: Rich C++ library

Qt Class Libraries

- QtCore - File i/o, event handling, multi-threading and concurrency ...
- QtGui - customizable widgets, 2D graphics canvas and OpenGL integration, powerful font and layout engine, style engine and widget style sheets, anti-aliasing, SVG support, advanced graphics effects, ...

Qt Designer

- Can be used to create user interfaces (Uis) for different purposes
- Provides different kinds of form templates for each UI
- the main window template is used to create application windows with:
 - menu bars,
 - toolbars
 - dock widgets.

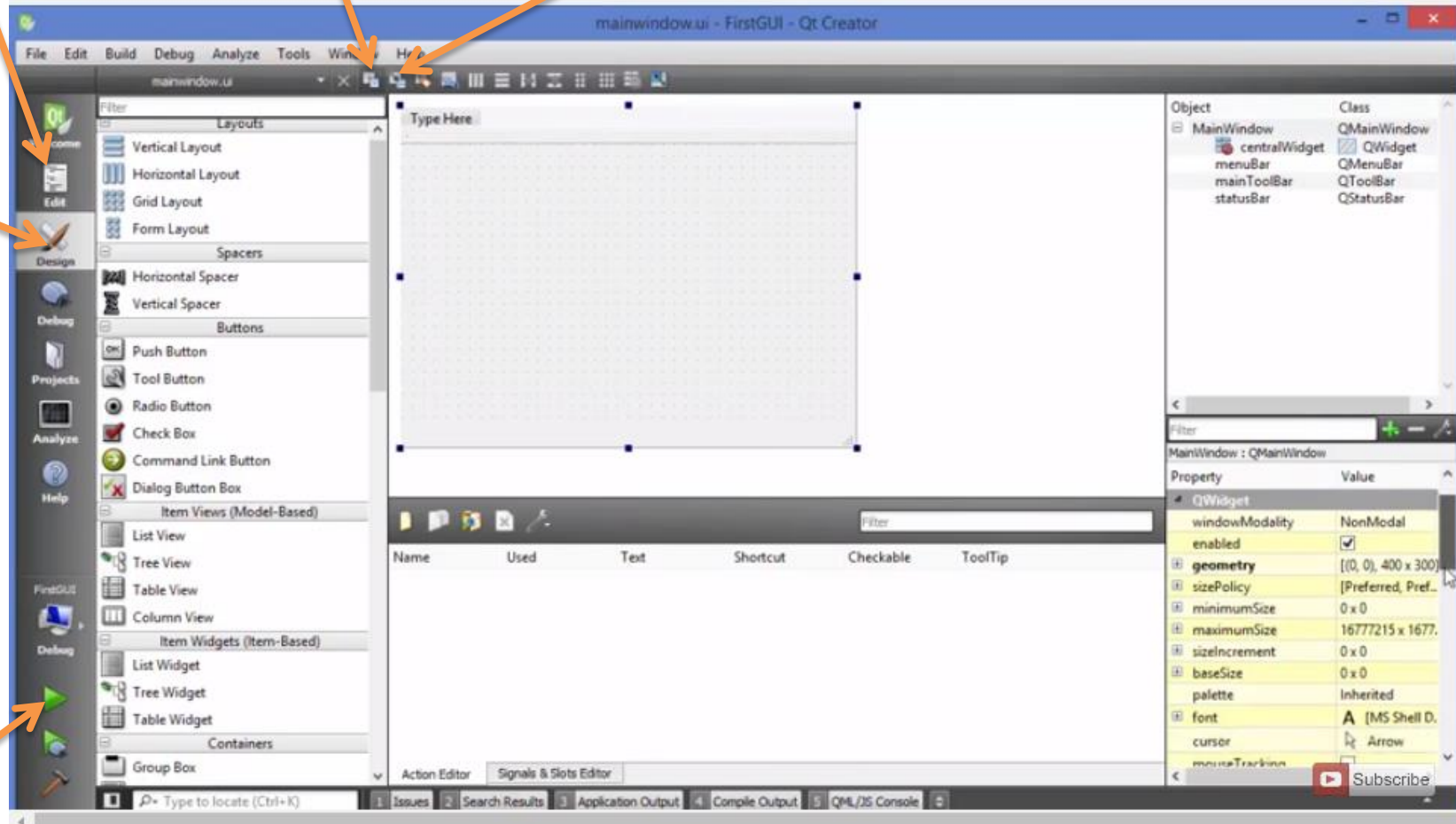
Qt Designer

Edit (code)

Edit widgets

Edit signals and slots

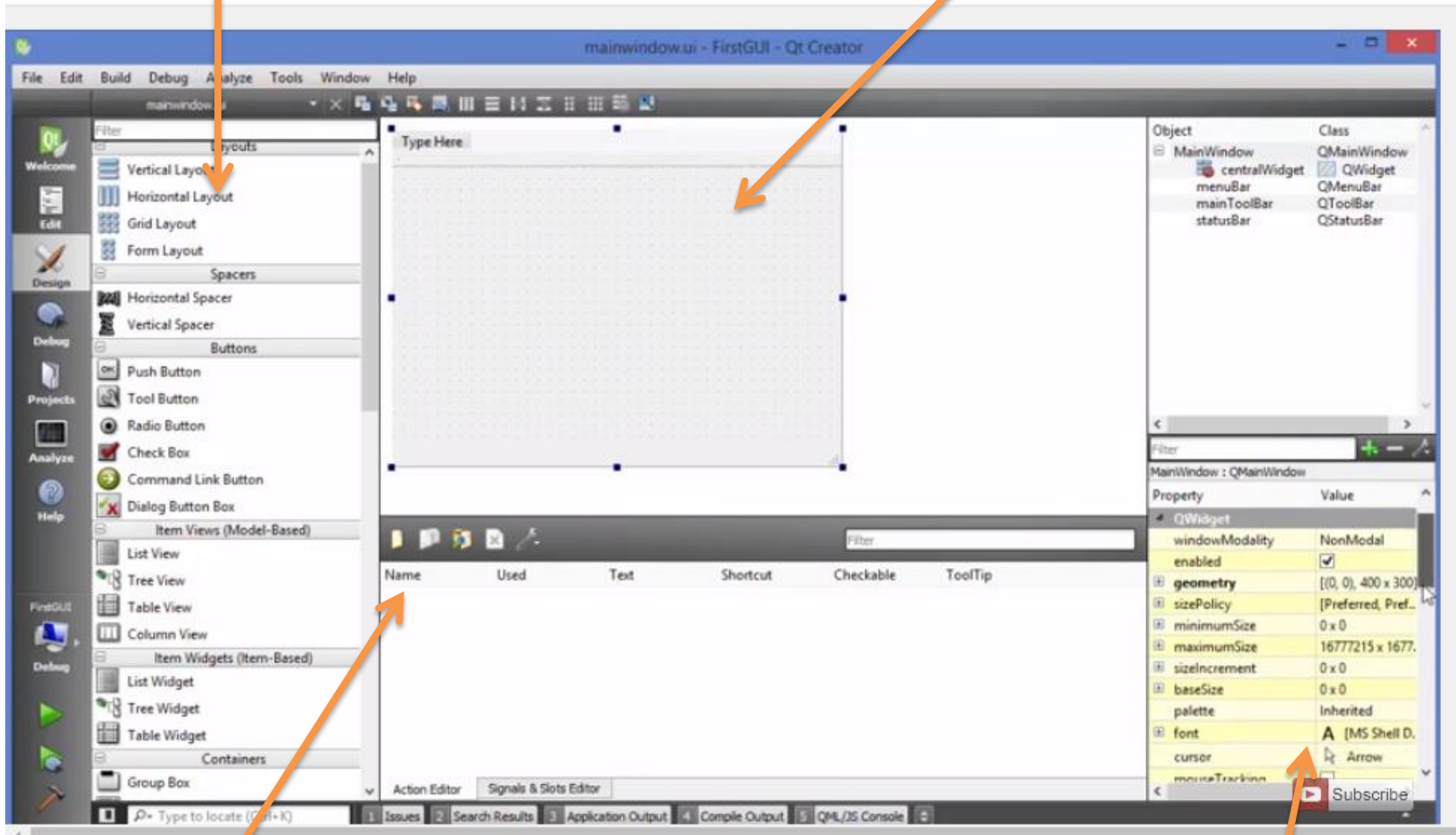
Design
(visually)



Run

Qt Designer

Widgets that can be drag and dropped into the main window



Action Editor

Properties of the dragged widget

Signals and slots

- Signals \leftrightarrow events
- Slots \leftrightarrow callbacks

Qt 5.8

- Intuitive APIs for C++ and JavaScript-like programming with Qt Quick for rapid UI creation.

Qt Framework

- Qt is a full development framework with tools designed to streamline the creation of applications and user interfaces for desktop, embedded, and mobile platforms.

Qt Creator IDE

- A powerful cross-platform integrated development environment (IDE), including UI designer tools and on-device debugging.

<http://doc.qt.io/qt-5/>

Videos for Qt beginners:

- <http://doc.qt.io/qt-5/gettingstarted.html>
- 1- Qt for beginners
<https://www.youtube.com/watch?v=EkjaiDsiM-Q>
- 2- How to download and install
<https://www.youtube.com/watch?v=eS7ank-qFjg>
- 3- How to create a very simple example
<https://www.youtube.com/watch?v=5JVL08yBMXA>
- 4- How to create a simple applications using QtDesigner
<https://www.youtube.com/watch?v=Y1c-ieVO-UY>



Videos for Qt beginners (cont.):

- 5- Signals and slots

<https://www.youtube.com/watch?v=F56fSKoNCtk>

- 6- Message boxes

https://www.youtube.com/watch?v=xJdxE_7IBsU

- 7- Layouts in Qt GUI applications

<https://www.youtube.com/watch?v=gWa2rqe8l6E>

- Dialog demo

<https://www.youtube.com/watch?v=Fgt4WWdn3Ko>

